

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA2004/001461

## A. CLASSIFICATION OF SUBJECT MATTER

C07D-305/14; C08G-65/02; C08F-261/06; C08F-283/66; C08F-2/18; C08J-3/24; C08F-16/12

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC<sup>7</sup> C08F-261/06; C08F-16/12; C08F-2/18; C08J-3/24

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base, and, where practicable, search terms used)

Delphion, Questel-Orbit, Canadian Patent Database (polyethylene\*, ethylen\*), ChemExper (substructure search)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1.288.272 A (SATAKE, Y. et al.) 8 November 2001 whole document	1, 5-7, 24-30, 41-51
Y	EP 692.501 A (HAYASHI, K. et al.) 13 October 1994 claims 1-2	1, 24
X	WO 02-40559 A (COTE, S.) 23 May 2002 cited in the application page 6, claims 1-4	1, 5-7, 8-15, 24-30, 41-52
X, P	WO 2003-102040 A (SODERMAN, T.) 11 December 2003 page 5 and claims 1-10	1, 8-15, 24-30, 41-52
Y	WO 99-64484 A (TROFIMOV, B. A. et al.) 16 December 1999 page 3 and claim 1	1, 8-15, 24-30, 41-52
X	EP 633.912 (SNYDER, J. R. et al.) 18 January 1995 pages 2-3 and claims 1-4	41-44, 48-49, 51
X, P	WO 2004-014984 (SUNKARA, H. B., et al.) 19 February 2004 whole document	41-44
X	US 5.910.554 (Kempe et al.) 9 June 1999 cited in the application whole document	41, 44, 48-52

Further documents are listed in the continuation of Box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :  
 "A" document defining the general state of the art which is not considered to be of particular relevance  
 "E" earlier application or patent but published on or after the international filing date  
 "I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  
 "O" document referring to an oral disclosure, use, exhibition or other means  
 "P" document published prior to the international filing date but later than the priority date claimed

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention.  
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  
 "&" document member of the same patent family

Date of the actual completion of the international-type search  
22 October 2004 (22-10-2004)Date of mailing of the international-type search report  
24 December 2004 (24-12-2004)

Name and mailing address of the ISA/  
 Commissioner of Patents  
 Canadian Patent Office - PCT  
 Ottawa/Gatineau K1A 0C9  
 Facsimile No. 1-819-953-9358

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
**PCT/CA2004/001461**

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
EP1288272	05-03-2003	CN1426444T T EP1288272 A1 JP2002012693 A US2003114546 A1 US2003143399 A1 WO0183636 A1	25-06-2003 05-03-2003 15-01-2002 19-06-2003 31-07-2003 08-11-2001
EP692501	17-01-1996	EP0692501 A1 JP7173204 A US5824755 A WO9422930 A1	17-01-1996 11-07-1995 20-10-1998 13-10-1994
WO0240559	23-05-2002	AU1808902 A EP1352003 A2 US2004039126 A1 WO0240559 A2	27-05-2002 15-10-2003 26-02-2004 23-05-2002
WO03102040	11-12-2003	SE0201623D D0 WO03102040 A1	30-05-2002 11-12-2003
EP633912	02-09-1998	DE69320797D D1 DE69320797T T2 EP0633912 A1 JP7505439T T US5352713 A WO9320155 A1	08-10-1998 11-02-1999 18-01-1995 15-06-1995 04-10-1994 14-10-1993
WO04014984	9-02-2004	None	
US5910554	08-06-1999	US5656707 A US5910554 A WO9700273 A1	12-08-1997 08-06-1999 03-01-1997
WO9964484	16-12-1999	AU4544699 A WO9964484 A1	30-12-1999 16-12-1999

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**INTERNATIONAL SEARCH REPORT**International application No.  
PCT/CA2004/001461**Box No. I**      **Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)**

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:
  - a. type of material
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing
    - ☐ contained in the international application as filed
    - ☐ filed together with the international application in computer readable form
    - ☐ furnished subsequently to this Authority for the purposes of search
2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

**INTERNATIONAL SEARCH REPORT**International application No.  
PCT/CA2004/001461**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons :

- 1 ☐ Claims Nos. :  
because they relate to subject matter not required to be searched by this Authority; namely:
- 2 ☒ Claims Nos.: 16-23, 31-40, 41 (partially), 45-47 and 48-52 (partially)  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically :  
  
See supplemental sheet
- 3 ☐ Claims Nos. :  
because they are dependant claims and are not drafted in accordance with the second and third sentences of Rule

**Box III Observation where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows :

- 1 ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
- 2 ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
- 3 ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos. :
- 4 ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos. :

**Remark on Protest** ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

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## Continuation of Box No. II

The invention is claimed in so broad and imprecise terms that it cannot be clearly determined. It encompasses a very large number of compounds and processes thereof. When referring to the description for clarification of the terms, these terms are vaguely defined and still no invention can be clearly determined. The claims so lack support and the application so lacks disclosure that a meaningful search over the whole of the claimed scope is impossible. The search has therefore been limited to the examples using specific compounds, the general idea underlying these and the claims related thereto, namely claims 1-15, 24-30, 41 (partially), 42-44 and 48-52 (partially) according to the compounds found in the examples.

The present claims relate to monomers and polyethers defined by broad terms, namely EWG and ERG, or to polymerization processes without any clear characteristics defined therein. The claims cover all compounds having a functional group suiting an "EWG" or "ERG" definition whereas the application provides support within the meaning of article 5 PCT for only a very limited number of such compounds. Therefore, the claims related to the chemically modified monomers and the claims related to oxirane monomers, polymers, or processes thereof have not been searched; namely claims 16-23, 31-40, 41 (partially), 45-47 and 48-52 (partially).